Remarks/Arguments

Claims 1-21 are pending and of these claims 1-3, 9-13, and 16-21 stand rejected on varying grounds under § 103(a) while claims 4-8 and 14-15 are objected to but deemed to recite allowable subject matter.

No claims have been amended. A claim listing with the present status has been provided strictly for the Examiner's convenience. No new matter has been added by any amendments.

In view of the comments below Applicant respectfully requests that the Examiner reconsider the present application including claims 1-21, withdraw the rejection of these claims, and move this application to allowance.

Applicant is appreciative of the obvious efforts that have been extended in searching and examining the present application.

a) Claims 1-3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dehner, et al (US Pat. No.6,882,677 B2) in view of Shibutani (U.S. Pub. No. 2002/0173303 A1).

Claim 1 is an independent claim with claims 2-3 dependent thereon.

As noted in one or more earlier communications, Dehner, et al qualifies as prior art, if at all, only under 102(e). Similarly, Shibutani was filed on May 16, 2001 and the present application was filed on December 11, 2001 and thus Shibutani qualifies as prior art if at all only under 102(e). Therefore, Applicant reserves the right to file an appropriate Declaration regarding conception and due diligence, if needed.

The Examiner cites Dehner et al. and others in the rejection of claim 1. Claim 1 defines an approach for communicating in and around a localized wireless coverage area with specific features speaking to what happens when communication is established via a wide area network when the source mobile subscriber is outside a neighborhood cell and subsequently determines that a neighborhood cell is available and that the source unit is a subscriber thereto, i.e., a handoff from the wide area network to the ad hoc wireless network is undertaken.

Dehner et al speaks only to handoffs from one NAP to another NAP, i.e., handoffs with an ad hoc network and never discusses a handoff from a wide area network to a local area or ad hoc network. The only mention of a wide area network made by Dehner et al is noting that such networks have included handoff provisions between cells within wide area networks (see col. 4, lines 55-56). Thus Applicant respectfully submits that Dehner et al is not a relevant reference and thus not a proper reference for a rejection of pending claim 1.

The Examiner maintains that Dehner et al discloses defining a neighborhood cell by transmitting a localized wireless coverage area-identifying signal (see page 2, at 4.) and then at top of page 4 admits that Dehner et al "... is silent to disclosing defining a neighborhood cell by transmitting a localized wireless coverage area-identifying signal from a neighborhood cell transmitter."

The Examiner further maintains that Dehner et al shows establishing communication between a source mobile subscriber unit and a destination unit and the conditional features. The Examiner maintains that Dehner et al shows switching over to ad hoc wireless network coverage when the communication was established in a wide area network coverage (citing col. 1, lines 25-35).

Applicant respectfully submits that this is clearly inaccurate as the cited passage or the balance of Dehner et al merely notes that wide area networks have hand off provisions between cells of that network and furthermore than ad hoc networks do not. Nothing is said about handoffs from one form or network to another or conditions for doing so, etc.

The Examiner then maintains that Dehner et al (citing the same passage) shows switching over to wide area network coverage when the communication is established in the ad hoc wireless network and when the source mobile subscriber unit exits the neighborhood cell.

Applicant respectfully submits that this is clearly inaccurate as the cited passage or the balance of Dehner et al does not teach anything about a handoff from the ad hoc network to a wide area network or conditions for doing so, etc.

The Examiner then refers to Shibutani (a newly discovered reference) and makes various assertions.

Shibutani describes a communication network 100, which is a collection of IP based communication networks 150 and an IP core network, where each of these networks 150 is a cellular network (see detailed picture 150 bottom of FIG. 1 with cellular access points and also see cellular BTS's 150, lower right of FIG. 1). Shibutani does appreciate that the physical interface for different ones of the networks may differ and that extending battery life may necessitate selectively enabling different communication modules (module M1, etc.) in mobile terminals (MT) (FIG. 3, FIG. 5 and corresponding discussions).

Shibutani does discuss handoff within a network 150 (FIG. 2, [0029], [0030], etc. Shibutani does show overlapping networks 150a and 150b and does note that these networks may

require different modules and does discuss enabling and disabling the modules. Shibutani does not show or suggest an ad hoc wireless network or ad hoc wireless coverage network or handoffs from a wide area network to an ad hoc network or vice-versa.

The Examiner with reference to Shibutani, maintains that this reference shows the defining a neighborhood cell by transmitting a localized wireless coverage area-identifying signal from a neighborhood cell transmitter [0029]. This paragraph describes more or less conventional schemes for setting up handoffs from cell to cell (155a to 155b) in a typical cellular radio communication network and does show a beacon signal used to determine what cell or coverage area of a wide area network 150 a MT may be in. Shibutani is not dealing with local neighborhood cells or ad hoc wireless network coverage or what is done when wide area and local area coverages overlap.

The Examiner asserts that Shibutani shows "... the MT 135 ..., switching over (from the network 150b to the network 150a) when the source mobile subscriber unit (MT 135) enters the cell 150a ([0042] when the module M1 becomes ready, the module M2 is switched to the module M1 to continue the communication) to maintain the communication between the source mobile subscriber unit and the destination unit ([0048], the network 150b may become necessary to make a call to the MT 135. A call from the network 150b is initiated by delivering a first packet from network 150b to the network 150a. The network 150a obtains the information on the current location of the MT 135 from the HLR and delivers the packet to the MT 135 through the nearby BTS 155 forms the cell in which the MT 135 is currently located)."

Applicant respectfully submits that the above passage is not an appropriate construction of Shibutani. Paragraph [0042] discusses FIG. 5 and 5C and responding to a call from the

network 150a when the destination MT is in region R (network 150b). In one embodiment if the destination MT is in network 150b, a call is forwarded to 150b and terminated via Module M2 until Module M1 is ready at which point communication is continued via M1 and presumably network 150a. There is no indication that a handoff from network 150a to 150b or 150b to 150a occurs or what happens when a source mobile subscriber unit is a subscriber or moves locations, etc. It appears that both networks are sending the call and the destination MT merely makes a decision as to which module is activated/deactivated. Paragraph [0048] similarly does not discuss handoffs. Rather [0048] discusses making a call from one network 150b to a destination MT that is located in another network 150a and goes on to describe how network 150b learns of the location and serving BTS for the destination MT. Again no handoff is discussed or contemplated and certainly no handoff from a wide area network to or from an ad hoc network coverage area or what happens as a result of originating unit location change all as claimed is shown or suggested by either Dehner et al, Shibutani, or any combination thereof.

Thus and in view of the above discussions Dehner et al and Shibutani are not properly combined and even if combined do not teach all features of claim 1 or, at least by virtue of dependency any claims dependent thereon. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1-3 under 35 U.S.C. 103(a) as being unpatentable over Dehner, et al (US Pat. No.6,882,677 B2) in view of Shibutani (U.S. Pub. No. 2002/0173303 A1).

b) Claims 9-10, and 11-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dehner et al in view of Shibutani and further in view of Kotzin et al (US Pat. No. 6,108,322).

Claims 9 is an independent claim with claims 10-13 dependent thereon.

With reference to claim 9, the Examiner maintains that "Dehner discloses switching over to ad hoc wireless network coverage to maintain the data packet route to the destination unit upon determining that the data packet is being disrupted and upon entry into a defined neighborhood cell (col. 1, lines 25-35, handoff from one coverage area (cellular phone or ad hoc) to another ..."

From the above discussions with reference to claim 1 it is clear that Dehner et al does not show or suggest switching over to ad hoc wireless network coverage from wide area coverage under any circumstances. Dehner et al deals only with handoffs between access points or NAPs within an ad hoc network.

The Examiner then maintains as above, that "Shibutani discloses the switching over further conditioned on receiving a localized wireless area identifying signal and determining whether service is available and authorized in the defined neighborhood cell ([0029], ..."

As noted above, Applicant respectfully submits that Shibutani merely shows known handoff schemes in typical cellular systems as will be appreciated by those of ordinary skill and does not show determining whether service is available, etc. in a neighborhood cell (i.e., a cell of an ad hoc coverage area). Shibutani simply does not speak of an ad hoc network.

The Examiner then refers to Kotzin for the premise that network frame error rate may be used to initiate a handoff given a stronger base station is available. Even assuming Kotzin shows or suggested the frame error rate, Kotzin does not show or suggest switching over to ad hoc network coverage all as claimed.

In view of the above discussions, this assortment or combination of references clearly does not show or suggest all features of claim 9 or, at least by virtue of dependency, claims dependent

thereon. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 9-13 under 35 U.S.C. 103(a) as being unpatentable over Dehner et al in view of Shibutani and further in view of Kotzin et al (US Pat. No. 6,108,322).

c) Claims 16-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dehner et al in view of Shibutani and further in view of Lewis (US Pat. No. 6,393,261).

Claim 16 is an independent claim with claims 17-21 dependent thereon.

With reference to claim 16, the Examiner maintains that " Dehner discloses a source mobile subscriber unit including a transceiver for communication through wide area network coverage outside of the neighborhood cell, and for communicating through ad hoc wireless network coverage within the neighborhood cell; a destination unit including a transceiver for communicating through the wide area network coverage outside of the neighborhood cell, and for communicating through the ad hoc wireless network coverage within the neighborhood cell (col. 1, lines 25-35, ...)."

Applicant respectfully disagrees with the Examiner's construction of Dehner et al. Dehner et al does not show or suggest anything about a transceiver for communication through a wide area network or coverage outside of a neighborhood cell or a destination unit for communicating via wide area network and ad hoc network as stated by the Examiner. The cited passage again notes that handoffs between cells in cellular phone systems are known and that such handoffs between NAPs in ad hoc networks are not known and has nothing to say or suggest about subscriber units operating in both systems or handoffs there between.

The Examiner then maintains that "Shibutani discloses a last hop node for defining a neighborhood cell; the last hop node further for causing the source mobile subscriber unit to communicate with the destination unit through the cell coverage when the source mobile subscriber unit is outside of the neighborhood cell and for causing the source mobile subscriber unit to communicate with the destination unit through the neighborhood cell coverage when the source mobile subscriber unit is within the neighborhood cell ([0029],..."

The Examiner did not identify what elements in Shibutani are supposed to represent the last hop node. Applicant respectfully submits that [0029] as discussed above merely shows handoffs in a cellular system facilitated by signals from serving BTSs, e.g. BTS 155a, 156b, etc, and relative signal strength. These signals may be construed to in some sense as defining wide area coverage cells in a cellular system, however they do not define a neighborhood cell or ad hoc network coverage as claimed.

The Examiner next maintains that Shibutani shows or suggests "... switching over (from the network 150b to the network 150a) when the source mobile subscriber unit (MT 135) enters the cell 150a ([0042] when the module M1 becomes ready, the module M2 is switched to the module M1 to continue the communication) to maintain the communication between the source mobile subscriber unit and the destination unit ([0048], the network 150b may become necessary to make a call to the MT 135. A call from the network 150b is initiated by delivering a first packet from network 150b to the network 150a. The network 150a obtains the information on the current location of the MT 135 from the HLR and delivers the packet to the MT 135 through the nearby BTS 155 forms the cell in which the MT 135 is currently located)."

Applicant respectfully disagrees with the Examiner's construction of Shibutani noting as a threshold matter that this reference has nothing to do with ad hoc networks or neighborhood

cells in such networks or defining the same. Paragraph [0042] discusses two approaches for terminating a call originated from network 150a at a destination MT in region (R) (network 150b), where Applicant notes that each of these networks is a cellular or wide area coverage network. In one instance an instruction is forwarded to the destination MT to enable resource (module) M1 so that the call can be received from network 150a. In the second, the call is forwarded to network 150b and received by M2 until M1 is enabled. One might argue the network 150a (construed as the last hop node???) caused the source mobile subscriber unit to communicate via network 150a but that is only a portion of the claimed features.

Paragraph [0048] considers the situation where the call is originated from network 150b (and one presume a source mobile subscriber unit therein) and the destination MT is in network 150a or beyond. Network 150b obtains location information via network 150a and forwards the call to network 150a or otherwise depending on the location of the MT. One might argue the network 150b (construed as the last hop node???) caused the source mobile subscriber unit to communicate via network 150b. Thus the Examiner seems to consider network 150a plus network 150b as the last hop node. However this falls apart since the last hop node is for defining a neighbor hood cell and it seems disingenuous to construe network 150a and 150b (each comprising a multiplicity of BTSs) as defining a neighborhood cell.

The Examiner then refers to Lewis and asserts that "Lewis discloses a first access point unit including a first source transceiver for communicating through a first communication channel coverage outside of the second communication channel coverage and a second transceiver for communicating through second communication channel coverage; a second access unit including a first transceiver for communicating through the first communication channel coverage outside of the second communication channel coverage, and a second

transceiver for communicating through the second communication channel."

The Examiner did not provide any specific citation to Lewis. Applicant notes that Lewis describes an Access point that is coupled to a system backbone and which is suitable for conducting two simultaneous communications on two distinct channels (frequency hopping patterns) (col. 2, lines 11-43). Lewis does indicate that the access point includes two transceivers (see FIG. 2). Nothing in Lewis indicates that one transceiver uses wide area coverage while the other uses ad hoc wireless network coverage with these respectively conditioned on location within the ad hoc wireless network coverage area. In fact Lewis seems to be focused on serving two different mobile units and the access point appears to be fixed and thus its location within a wide area or ad hoc coverage area would appear to be invariant.

In view of the above discussions, this assortment or combination of references clearly does not show or suggest all features of claim 16 or, at least by virtue of dependency, claims dependent thereon. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 16-21 under 35 U.S.C. 103(a) as being unpatentable over Dehner et al in view of Shibutani and further in view of Lewis (US Pat. No. 6,393,261).

d) Claims 4-8 and 14-15 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all relevant limitations.

Applicant agrees that these claims recite allowable subject matter. Claims 4-8 depend from claim 1 and claims 14-15 depend from claim 9. In view of the above discussions, claims 1 and 9 are clearly allowable over all references of record and thus at least by virtue of dependency these claims should likewise be allowable. Thus, Applicant respectfully submits that this

objection to claims 4-8 and 14-15 has been overcome and therefore respectfully requests that the Examiner reconsider and withdraw the objection to these claims.

Accordingly, Applicant respectfully submits that the pending claims clearly and patentably distinguish over the cited references of record and as such are to be deemed allowable. Such allowance is hereby earnestly and respectfully solicited at an early date. If the Examiner has any suggestions or comments or questions, calls are welcomed at the phone number below.

Although it is not anticipated that any fees are due or payable since this response is being timely filed within the allowed 3 month time period and no other fees appear to be due or payable, the Commissioner is hereby authorized to charge any fees that may be required or credit any overpayments to Deposit Account No. **50-3435**.

This response if being filed in a representative capacity by Charles W. Bethards, Registration number 36,453, in accordance with the provisions of 37 CFR 1.34.

Respectfully submitted,

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